

How Mobile Technologies Can Change the Way We Interact with Our Patients



Course Author(s): Mario Rui Araujo, PhD, M. Psych, BSDH

CE Credits: 1 hours

Intended Audience: Dentists, Dental Hygienists, Dental Students, Dental Hygiene Students

Date Course Online: 09/14/2020

Last Revision Date: N/A

Course Expiration Date: 09/13/2023

Cost: Free

Method: Self-instructional

AGD Subject Code(s): 550

Online Course: www.dentalcare.com/en-us/professional-education/ce-courses/ce602

Disclaimers:

- P&G is providing these resource materials to dental professionals. We do not own this content nor are we responsible for any material herein.
- Participants must always be aware of the hazards of using limited knowledge in integrating new techniques or procedures into their practice. Only sound evidence-based dentistry should be used in patient therapy.

Conflict of Interest Disclosure Statement

- Dr. Araujo is a member of Procter & Gamble's Global Dental Hygiene Advisory Board.

Introduction – Mobile Technologies

Despite evidence on the benefits of controlling dental biofilm for oral health, patients have difficulty complying. The use of mobile technologies seems to be useful in enhancing communication and collaboration between patients and oral health professionals so that patients' dental hygiene behaviors are increased.

Course Contents

- Overview
- Learning Objectives
- Video: Mobile Technologies
- Course Test
- References / Additional Resources
- About the Author

Overview

Mechanical control of biofilm is the primary therapeutic strategy for preventing periodontal diseases. Despite controlling dental biofilm being of paramount importance for preventing the most prevalent oral diseases and to maintain treatments, patients have difficulty adhering.

It is known that people thrive on novelty and challenge, seeking new experiences, stimulating activities, and fresh ideas. Under most theories of motivation, the curiosity that results is an approach-oriented motivational state that impels people to explore, learn, and get involved in an interesting event. Another hallmark of human motivation is a personal sense of control, a perceived self-efficacy that results from optimistic beliefs in one's own capacity to meet a challenge. These beliefs influence readiness and motivation to initiate behavior and expend effort, which is particularly important when approaching novel situations, such as using mHealth technologies in the oral health appointment; these beliefs ultimately make dental hygiene seem easier.

Consciousness-raising for health behavior may be facilitated by mobile digital technologies (mHealth) which provides the opportunity to display habit-disrupting cues such as apps, games, curiosity, and push messages. mHealth devices may offer such an opportunity by keeping a goal salient in working memory or by bringing the goal back to working memory at an appropriate time. Moreover, mHealth technologies can foster social support mechanisms, facilitating the creation of an authentic bond and rapport between the patient and the oral health professional and thereby supporting behavioral maintenance.

Learning Objectives

Upon completion of this course, the dental professional should be able to:

- Discuss the role of dental biofilm control on oral health.
- Discuss the role of behavior modification strategies in oral health.
- Discuss the role of communication in changing oral health behaviors.
- Evaluate the possible implementation of using mobile technologies in the oral health profession.

Video: Mobile Technologies



[Click on image to view video online.](#)

Course Test Preview

To receive Continuing Education credit for this course, you must complete the online test. Please go to: www.dentalcare.com/en-us/professional-education/ce-courses/ce602/test

- 1. There are many different models and theories of behavioral change that can help guide ways of thinking about practice. In oral health the most common is _____.**
 - A. Health Action Process Approach
 - B. Self-determination Theory
 - C. Theory of Planned Behavior
 - D. The Transtheoretical Model of Behavior
- 2. Health-compromising behaviors such as physical inactivity and poor oral hygiene habits are difficult to change. Most social-cognitive theories assume that an individual's intention to change is the best direct predictor of actual change. However, people often do not behave in accordance with their intentions. A new model emerged addressing a motivational and volitional phase in behavioral change and also addressing that intention is not enough to change behaviors. What is the name of that model?**
 - A. The Transtheoretical Model of Behavior Change
 - B. HAPA (Health Action Process Approach)
 - C. Theory of Planned Behavior
 - D. Self-determination Theory
- 3. How we communicate with our patient makes all the difference!**
 - A. True
 - B. False
- 4. According to Suvan and Ramseier: "It will be the patient's task to say how and why he or she should or might change. The clinician's role is to elicit these arguments for change from the patient."**
 - A. True. That's why we should be bossy!
 - B. False, there must be a typing error.
 - C. True, and we could use technologies to help that task.
 - D. False, that's a task for the professional and not for the patient.
- 5. There are ways of approaching the challenge of health behavior change that makes it less stressful for the clinician and with a greater potential for creating results in a brief period of time.**
 - A. No way!
 - B. Yes. One way.
 - C. Maybe...
 - D. Yes, many ways.
- 6. A common approach in addressing oral health-related behavior change is to give advice or to try to persuade patients toward a particular action.**
 - A. Yes, but that's a limited strategy, normally without results.
 - B. Yes, and it is a good strategy.
 - C. No, nobody uses it anymore.
 - D. No, it is never successful.

- 7. What can be considered the most important characteristic to use mHealth technologies?**
- A. The emotional dimension of the professional
 - B. The technology of the app
 - C. The oral health problem
 - D. The importance of use new technologies to address patients
- 8. We can use mHealth tools to _____.**
- A. change the way we work
 - B. innovate our dental clinic
 - C. improve - not necessarily change - our methods
 - D. be cool!
- 9. What services are delivered with mHealth technologies?**
- A. There are no firm limits to what services can be delivered via mobile platforms, though some specialties are better suited to mHealth than others.
 - B. Primary preventive services.
 - C. Secondly prevention services.
 - D. None, it does not work.
- 10. There is great potential for mobile use in the health care sector as it allows patients and providers the ability to communicate from anywhere in order to ask questions and collect information.**
- A. True
 - B. False

References

1. **Slide 3** - European Federaton of Periodontology. Dossier on Periodontal Disease. 2018:1-15. Accessed September 1, 2020.
2. **Slide 3** - Jepsen S, Blanco J, Buchalla W, et al. Prevention and control of dental caries and periodontal diseases at individual and population level: consensus report of group 3 of joint EFP/ORCA workshop on the boundaries between caries and periodontal diseases. *J Clin Periodontol*. 2017;44 Suppl 18:S85-S93. doi:10.1111/jcpe.12687.
3. **Slide 4** - Smith TS. Anatomic and physiologic conditions governing the use of the toothbrush. *Journal American Dental Association*. 1940 Jun;27(6):874-878.
4. **Slide 4** - Löe H, Theilade E, Jensen SB. Experimental gingivitis in man. *J Periodontol*. 1965;36:177-187. doi:10.1902/jop.1965.36.3.177.
5. **Slide 4** - Tonetti MS, Eickholz P, Loos BG, et al. Principles in prevention of periodontal diseases: Consensus report of group 1 of the 11th European Workshop on Periodontology on effective prevention of periodontal and peri-implant diseases. *J Clin Periodontol*. 2015;42 Suppl 16:S5-S11. doi:10.1111/jcpe.12368.
6. **Slide 7** - Wilder RS. Telling them to brush and floss is just not working. *Journal of Dental Hygiene*. 2013 Dec;87(6):318. Accessed September 1, 2020.
7. **Slide 8** - Schwarzer R. Modelling health behavior change: How to predict and modify the adoption and maintenance of health behaviours. *Applied Psychology*. 2008 Jan;57(1): 1-29. doi:10.1111/j.1464-0597.2007.00325.x. Accessed September 1, 2020.
8. **Slide 9** - Webb TL, Sheeran P. Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychol Bull*. 2006;132(2):249-268. doi:10.1037/0033-2909.132.2.249.
9. **Slide 10** - Järvinen M, Stolt M, Honkala E, Leino-Kilpi H, Pöllänen M. Behavioural interventions that have the potential to improve self-care in adults with periodontitis: a systematic review. *Acta Odontol Scand*. 2018;76(8):612-620. doi:10.1080/00016357.2018.1490964.
10. **Slide 11** - Rollnick S, Miller WR, Butler C. *Motivational interviewing in health care : helping patients change behavior*. New York, NY. Guilford Press. 2008.
11. **Slide 11** - Michie S, Richardson M, Johnston M, et al. The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Ann Behav Med*. 2013;46(1):81-95. doi:10.1007/s12160-013-9486-6.
12. **Slide 11** - Newton JT, Asimakopoulou K. Managing oral hygiene as a risk factor for periodontal disease: a systematic review of psychological approaches to behaviour change for improved plaque control in periodontal management. *J Clin Periodontol*. 2015;42 Suppl 16:S36-S46. doi:10.1111/jcpe.12356.
13. **Slide 15** - Hotwani K, Sharma K, Nagpal D, Lamba G, Chaudhari P. Smartphones and tooth brushing: content analysis of the current available mobile health apps for motivation and training. *Eur Arch Paediatr Dent*. 2020;21(1):103-108. doi:10.1007/s40368-019-00457-1.
14. **Slide 16** - Toniazzo MP, Nodari D, Muniz FWMG, Weidlich P. Effect of mHealth in improving oral hygiene: A systematic review with meta-analysis. *J Clin Periodontol*. 2019;46(3):297-309. doi:10.1111/jcpe.13083.
15. **Slide 16** - Qubop Inc. 3 Major Trends in Healthcare: Social, Mobile and Games. 2011 Nov 17. Accessed September 1, 2020.
16. **Slide 17** - Dombrowski SU, O'Carroll RE, Williams B. Form of delivery as a key 'active ingredient' in behaviour change interventions. *Br J Health Psychol*. 2016;21(4):733-740. doi:10.1111/bjhp.12203.
17. **Slide 18** - Ramseier C, Suvan JE. *Health behavior change in the dental practice*, 1st Editon. Ames, Iowa. Blackwell Publishing, Inc. 2010.
18. **Slide 19** - Hotwani K, Sharma K, Nagpal D, Lamba G, Chaudhari P. Smartphones and tooth brushing: content analysis of the current available mobile health apps for motivation and training. *Eur Arch Paediatr Dent*. 2020;21(1):103-108. doi:10.1007/s40368-019-00457-1.

19. **Slide 21** - Brush Up: Toothbrush Trainer, Big Fun Development. Accessed September 1, 2020.
20. **Slide 25** - Araújo MR, Alvarez MJ, Godinho CA, Roberto MS. An eight-month randomized controlled trial on the use of intra-oral cameras and text messages for gingivitis control among adults. *Int J Dent Hyg.* 2019;17(3):202-213. doi:10.1111/idh.12391
21. **Slide 26** - Kashdan TB, SilviaPJ. Curiosity and Interest: The Benefits of Thriving on Novelty and Challenge. *The Oxford Handbook of Positive Psychology*, 2nd edn. 2009 Jul. 10.1093/oxfordhb/9780195187243.013.0034.

Additional Resources

- No Additional Resources Available.

About the Author

Mario Rui Araujo, PhD, M. Psych, BSDH



Mario has a Master's degree in Health Psychology (1999) and a PhD in Psychology (2021) by the University of Lisbon (Psychology School). His research in the area of behaviour change focuses in the use of different technologies to enhance the oral health behaviour of patients. He is a graduate of the Dental Hygiene Program at the University of Lisbon (1990) and earned a bachelor's degree in Science (Dental Hygiene) from the University of Washington, Seattle (1993). He is also an International speaker in oral health behavior modification and communication skills, having delivered numerous guest lectures in various countries of the world. He is an Adjunctive Professor and the Director of the Dental Hygiene Program at Portalegre Health School. Mario lives in Caldas da Rainha, Portugal where he also worked as a clinical/behavioral dental hygienist. He has a wife, 4 kids, 3 cats, and plays with Legos as a Lego Serious Play Facilitator.

Email: mra@meo.pt